



SCIENCE

LATEST AMS-02 RESULTS REACH UNPRECEDENTED ENERGIES

The latest results of the large antimatter detector AMS-02 (Alpha Magnetic Spectrometer) have been published in Physical Review Letters. The INFN and the Italian Space Agency (ASI) are taking part in the experiment that has been orbiting the Earth aboard the International Space Station since May 2011. Of the 41 billion cosmic ray events analysed in the first 30 months of the mission, 10 million have been identified as electrons and positrons. Recent studies have measured the positron flux up to 500 GeV and the electron flux up to 700 GeV: energy levels never reached before in these cosmic rays. “This result represents an important step forward in the study of a phenomenon (excess of positrons) first detected by the PAMELA space experiment and which is currently being measured by AMS-02 with unprecedented precision and covering a wider range of energies than ever before”, remarked Fernando Ferroni, President of the INFN. “The partnership between the INFN, ASI and Italian industry in this experiment has achieved an important milestone, providing significant new insights into the nature of a mysterious phenomenon and opening the way to new discoveries”. ■



ITALY

THE INFN NATIONAL LABORATORIES ON GOOGLE STREET VIEW

You can now visit the Frascati, Gran Sasso, Legnaro and Southern National Laboratories using the Street View option in Google Maps. These are the first Italian research centres to be photographed and “mapped” by Google: further recognition of the INFN’s research facilities as centres of scientific excellence just months after the issue of four postage stamps dedicated to the Labs. Using the Street View service, you can go on a virtual tour of the rooms at the laboratories and get a 360-degree view of particle accelerators and experiments looking for dark matter and the elusive neutrinos. The four virtual tours were created by taking some 1,300 panoramic pictures in six sessions during which researchers at the INFN worked in collaboration with staff from Google. ■